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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,121	04/01/2004	Chishio Hosokawa	251364US0DIV	8005
22850	7590	07/29/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			YAMNITZKY, MARIE ROSE	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/814,121

Applicant(s)

HOSOKAWA ET AL.

Examiner

Marie R. Yamnitzky

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004 and 30 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. 09/623,057, which is a
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application, from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date rec'd 01 Apr 2004 & 30 Jun 2004.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. The preliminary amendment filed April 01, 2004, which cancels claims 1-23 and adds claims 24-29, has been entered.

Claims 24-29 are pending.

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it is too long and is not in single paragraph form. Correction is required so as to provide an abstract that is a single paragraph and fits on a single page. See MPEP § 608.01(b). The examiner also suggests that the abstract be amended so as to be directed to the presently claimed subject matter.

3. The disclosure is objected to because of the following informalities:

Formula (41) on page 42 of the specification contains an error in showing one of the two nitrogens as having four bonds. (This error was not noted during prosecution of the parent application).

Appropriate correction is required.

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-251633 or US 6,280,859 B1.

JP 10-251633 and US 6,280,859 B1 are in the same patent family. The U.S. patent is taken by the examiner as being an English language equivalent of the Japanese document.

JP '633/US '859 suggest compounds according to formula (4) as defined in present claims 24-29. In compounds of prior art formula [1], A may represent a divalent residue of chrysene. For example, see column 2, line 11-c. 3, l. 35 and c. 4, l. 50-c. 5, l. 1 in US '859. In compounds of prior art formula [1], one or more of X^1 to X^4 may represent $-\text{CH}=\text{CH}-$ as demonstrated, for example, by formula (B-3) in c. 42 of US '859.

Compounds according to prior art formula [1] in which A represents a divalent residue of chrysene and one or more of X^1 to X^4 represent $-\text{CH}=\text{CH}-$ are compounds according to present general formula (4) in which $a + b + c + d > 0$ and position isomers thereof.

Compounds according to prior art formula [1] in which A represents a divalent residue of chrysene and none of X^1 to X^4 represent $-\text{CH}=\text{CH}-$ (as when each of the monovalent groups attached to the nitrogens in prior art formula [1] represent one of formulae (B-1), (B-2) or (B-4)

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through (B-30) in c. 42-46 of US '859) are compounds according to present general formula (4) in which $a + b + c + d = 0$ and position isomers thereof.

The compounds of formula [1] of JP '633/US '859 are disclosed for use in an organic EL device.

Although JP '633/US '859 do not disclose examples of specific compounds meeting the limitations of present claims 24-29, it is the examiner's position that it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to make various compounds within the scope of prior art formula [1], especially those containing groups that are specifically disclosed by the prior art as represented by A. One of ordinary skill in the art would have been motivated to make a variety of compounds within the scope of prior art formula [1] in order to have a variety of compounds that could be used in an organic EL device as taught by the prior art. One of ordinary skill in the art would have reasonably expected that compounds within the scope of prior art formula [1] having groups specifically disclosed by the prior art as represented by A would be suitable for the prior art purposes.

The compounds of the present claims are compounds having a divalent residue of chrysene substituted with diarylamino groups at positions 5 and 11 of the chrysene ring structure whereas the prior art does not limit the bonding positions of the diarylamino groups on the chrysene ring structure. Accordingly, as noted above, the prior art provides for compounds of the present claims as well as position isomers thereof. One of ordinary skill in the art at the time of the invention would have reasonably expected that substitution of chrysene with diarylamino

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groups at any two positions on the chrysene ring structure would provide compounds having similar properties that would be suitable for the prior art purposes.

6. Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-251633 or US 6,280,859 B1 as applied above, either further in view of JP 9-268284.

Further with respect to compounds according to present general formula (4) in which $a + b + c + d > 0$, one of ordinary skill in the art, having knowledge of the teachings of JP 9-268284 would have reasonably expected that a variety of compounds according to formula [1] in JP '633/US '859 wherein A represents a divalent residue of chrysene and one of more of X^1 to X^4 represent $-\text{CH}=\text{CH}-$ would be suitable for use in an organic EL device. JP 9-268284 discloses compounds that are suitable for use in an organic EL device. Various compounds of JP 9-268284 are compounds of formula [1] in JP '633/US '859 in which each of A and Ar^1 to Ar^4 represents a divalent residue of an aromatic compound having from 6 to 20 carbon atoms and each of X^1 to X^4 represents $-\text{CH}=\text{CH}-$.

7. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 6:30 a.m. to 4:00 p.m. Monday, Tuesday, Thursday and Friday, and every other Wednesday from 6:30 a.m. to 3:00 p.m.

The current fax number for Art Unit 1774 is (703) 872-9306 for all official faxes. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY
July 26, 2004



MARIE YAMNITZKY
PRIMARY EXAMINER

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